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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/051,429

01/17/2002

John P. Brostrom

M-11947 US

9051

7590

07/13/2004

Finnegan, Henderson, Farabow, Garrett &
Dunner, L.L.P.
1300 I Street, NW
Washington, DC 20005-3315

EXAMINER

STAHL, MICHAEL J

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|----------------------------------------|--|
| Office Action Summary | Applicati n N . 10/051,429 | Applicant(s) BROSTROM ET AL. | |
| | Examiner Mike Stahl | Art Unit 2874 | |

-- The MAILING DATE f this communication appears on the c ver sheet with the correspondence address --

Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,6,10-17 and 22-26 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5,6,10-15 and 22-26 is/are allowed.
- 6) ☒ Claim(s) 16 and 17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

This office action is in response to the amendment filed April 9, 2004. The changes to the claims are acknowledged. Claims 5-6, 10-17, and 22-26 remain.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 16 is rejected under 35 U.S.C. 102(a) as being anticipated by Gregory (US 6305848).

Gregory discloses an optical transceiver comprising a housing 16 (called a mounting block in the reference) for optical transmitters 60/62 and receivers 64/66 (see figs. 2 and 4-6). The housing is removably mountable on a circuit board 20 with a first portion of the housing above a plane of the circuit board and a second portion of the housing below the plane of the circuit board. The housing includes a heat sink (i.e. itself) as noted at col. 3 lines 61-63 and col. 6 lines 16-23.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2874

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made:

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gregory (cited above).

Gregory does not expressly disclose heat fins on housing 16, but does refer to “heat dissipation features” at col. 6 lines 18-21. Heat fins are old and well known. It would have been obvious to a person having ordinary skill in the art to provide housing 16 with fins in order to advantageously increase the surface area available for heat dissipation.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robin et al. (US 5134679).

Robin discloses an optical transceiver including a housing 22 which is removably mountable on a circuit board 11 such that part of the housing lies above a plane of the circuit board and part of the housing lies below that plane (see figs. 3-4). The reference does not expressly state that the housing includes a heat sink. However, heat sinks are old and well known in the art. It is also well known in the art that excessive heat tends to diminish the performance and lifetime of optoelectronic devices (see e.g. col. 6 lines 21-23 in the Gregory reference applied above). Accordingly it would have been obvious to a person having ordinary skill in the art to provide housing 22 in Robin with a heat sink to draw excess heat away from the enclosed optoelectronic devices 20/21. Furthermore it would have been obvious to provide said heat sink with fins in order to increase its heat dissipation efficiency.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Arguments

Applicant's remarks regarding the previous rejection of claims 10 and 12 under Hartman et al. are persuasive. The rejection under Hartman has been withdrawn.

Applicant's remarks in relation to the previous rejection of claim 16 under Gregory are not persuasive. Applicant amended claim 16 to further recite that the housing is removably mountable on a circuit board, and argued that the housing 16 is fixedly attached to a circuit board 20. The examiner does not find support in Gregory for this assertion. The text at col. 4 line 65- col. 5 line 5 which applicant cites refers to the mating optical connector 12, and states that this connector must be rigidly mounted to the chassis based system. It also states that the connector 12 receives the connecting portion of module 10. This does not place any condition on the permanence of the attachment of housing 16 to board 20. Even assuming that Gregory had taught that the housing 16 is rigidly mounted to the board 20, a physical connection can be simultaneously rigid and removable. It is acknowledged that when the module 10 is assembled onto the motherboard 14, the housing 16 would not be removable from the boards 20. However,

Art Unit: 2874

Gregory does not state that this assembly must be permanent and indeed it would seem practical to be able disassemble the structure so that individual boards 20 could be replaced as needed rather than scrapping the entire unit. In reference to figs. 2 and 6, Gregory states that the connectors 28 (which are a part of boards 20 as seen in fig. 5) are inserted into apertures 18 of the housing 16 (col. 6 lines 11-14). This does not suggest any kind of non-removable connection between the housing 16 and the boards 20. In summary the examiner believes the housing 16 is removably mounted to a board 20 in Gregory.

Applicant's comments concerning the previous rejection of claim 16 under Robin et al. are technically correct. Therefore the anticipation rejection has been replaced with an obviousness rejection set forth above.

Allowable Subject Matter

Claims 5, 6, 10-15, and 22-26 are allowed. The reasons for allowance of claims 5, 6, 11, and 22-26 were established in a previous office action.

Applicant amended independent claims 10 and 12 to recite that the portion of the housing above the plane of the board and the second portion of the housing below the plane of the board are external to the board. Hartman et al. was the only reference applied to these claims in the last office action. The housing 22 is clearly not external to the circuit board layers 15-17 when it is mounted to the board. Since the mating keyway shape of Hartman et al. is critical to that invention, it would not be obvious to modify the housing 22 to be external to the board. No other reference of record discloses or suggests an optical transceiver which meets all the limitations of claims 10 or 12. Claims 13-15 are allowed by dependence from claim 12.

Conclusion

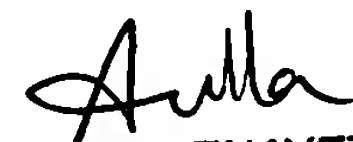
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

US 6682230 is cited on the attached PTO-892 form since it discloses a notch/rail structure in relation to a cut-out in a circuit board

Any inquiry concerning this communication should be directed to Mike Stahl at (571) 272-2360. Official communications which are eligible for submission by facsimile and which pertain to this application may be faxed to (703) 872-9306. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to the technical support staff supervisor at (571) 272-1626.

MJS

Michael J. Stahl
Patent Examiner
Art Unit 2874
June 30, 2004


AKM ENAYET ULLAH
PRIMARY EXAMINER